

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A chain of snapshots for preserving data, comprising:

a first snapshot, wherein the first snapshot is a read only snapshot that cannot be written by a user; and

a second snapshot descending from the first snapshot, wherein the second snapshot is a read-write snapshot that can be written by the user.

Claim 2 (original): The chain of snapshots of claim 1, further comprising a third snapshot descending from the first snapshot, wherein the third snapshot is another read-write snapshot.

Claim 3 (original): The chain of snapshots of claim 1, further comprising a third snapshot descending from the second snapshot, wherein the third snapshot is another read only snapshot.

Claim 4 (original): The chain of snapshots of claim 1, wherein at least one of the first and the second snapshots comprises:

a table comprising a plurality of entries corresponding to first parts of block addresses;

wherein one of the plurality of entries contains a pointer to contiguous data blocks in said at least one of the first and the second snapshots.

Claim 5 (original): The chain of snapshots of claim 1, wherein at least one of the first and the second snapshots comprises:

a first table comprising a first plurality of entries corresponding to first parts of block addresses;

a second table comprising a second plurality of entries corresponding to second parts of block addresses;

wherein one of the first plurality of entries contains a pointer to the second table and one of the second plurality of entries contains a pointer to contiguous data blocks in said at least one of the first and the second snapshots.

Claim 6 (original): A method for writing to data blocks in snapshots for preserving data, comprising:

creating a first snapshot, wherein the first snapshot is a read only snapshot that cannot be written by a user; and

creating a second snapshot descending from the first snapshot, wherein the second snapshot is a read-write snapshot that can be written by the user.

Claim 7 (original): The method of claim 6, further comprising creating a third snapshot descending from the first snapshot, wherein the third snapshot is another read-write snapshot.

Claim 8 (original): The method of claim 6, further comprising creating a third snapshot descending from the second snapshot, wherein the third snapshot is another read only snapshot.

Claim 9 (original): The method of claim 6, wherein at least one of said creating a first snapshot and said creating a second snapshot comprises:

creating a first table comprising a first plurality of entries corresponding to first parts of block addresses.

Claim 10 (original): The method of claim 9, further comprising writing one or more data blocks to the first snapshot or the second snapshot, said writing comprising:

saving said one or more data blocks in the page of contiguous data blocks; and

writing one of the first plurality of entries with a pointer to the contiguous data blocks if said one or more data blocks consist all of the data blocks with the same first part of their block addresses.

Claim 11 (original): The method of claim 9, further comprising writing one or more data blocks to the first snapshot or the second snapshot, said writing comprising:

creating a second table comprising a second plurality of entries corresponding to second parts of block addresses;

saving said one or more data blocks in a page of contiguous data blocks;

writing one of the first plurality of entries with a pointer to the second table; and

writing one of the second plurality of entries with a pointer to the contiguous data block if said one or more data blocks consist all of the data blocks with the same first part and the same second part of their block addresses.

Claim 12 (original): The method of claim 9, further comprising, prior to said writing the data block:

determining if the write request is a first write to the data block in the second snapshot; and

if the write request is the first write to the data block in the second snapshot, copying the data block to a third snapshot descending from the second snapshot, wherein the third snapshot is a read-only snapshot.

Claim 13 (original): A method for reading a data block having a block address from a snapshot, comprising:

using a first part of the block address to look up one of a first plurality of entries in a first table in the snapshot;

if said one of the first plurality of entries contains a pointer to a first page of contiguous data blocks in the snapshot, following the pointer to the first page and reading the first page; and

if said one of the first plurality of entries contains a pointer to a second table in the snapshot, following the pointer to the second table.

Claim 14 (original): The method of claim 13, further comprising, if said one of the first plurality of entries contains a pointer to a second table in the snapshot:

using a second part of the block address to look up one of a second plurality of entries in the second table;

if said one of the second plurality of entries contains a pointer to a second page of contiguous data block in the snapshot, following the pointer to the second page and reading the second page; and

if said one of the second plurality of entries contains a pointer to a third table in the snapshot, following the pointer to the third table.

Claim 15 (original): The method of claim 14, further comprising, if said one of the second plurality of entries contains a pointer to a third table in the snapshot:

using a third part of the block address to index one of a third plurality of entries in the third table;

if said one of the third plurality of entries contains a pointer to the data block in the snapshot, following the pointer to the data block and reading the data block.

Claims 16 to 38 (canceled).